

REMARKS

The drawings were objected to under 37 CFR 1.83(a) for lacking a "Prior Art" legend on FIG 1. Also a "turbine component" must be shown in the drawings or cancelled in the claims.

Claim 13 is objected to because of informalities. Claims 13 and 22 were rejected under 35 USC 102(b) as being anticipated by Johnson (EP 0228177). Claims 14-21 and 23-27 were rejected under 35 USC 103(a) as being unpatentable over Johnson in view of Heidenhain et al. (US 4,863,536).

Claims 13, 17-19, 23 and 27 are amended herein. Claim 22 is cancelled. New claims 28-30 are added. Thus claims 13-21 and 23-30 are presented for examination.

Drawing amendment

A replacement drawing sheet 1/1 is attached to add the legend "Prior Art" to FIG 1 as required. No other changes were made. The term "turbine component" has been eliminated from the claims. Element 10 is described in the specification as a "test body".

Response to claim objections

Claim 13 is clarified as to the meaning of "flexible rear key" and "different radii of curvature". The subject matter of the claims is not changed by these clarifications.

Response to rejection under 35 USC 102

Johnson does not mention a ferromagnetic material as part of his apparatus, and he does not mention amplification at all. The amendments herein clarify that the term "adapted for ferromagnetic signal amplification" means that the rear layer 22 (or "rear key") comprises a ferromagnetic material. This is supported in Applicant's paragraphs 29-31 and 35. This clarification does not change the subject matter of the claims.

Johnson does not show an element 46 that is cited by the Examiner, so it is unclear which element the Examiner feels corresponds to Applicant's flexible rear key 22. The Examiner may be referring to the top layer of Johnson shown in FIG 3 with a dimension of .0005". However, this layer in Johnson is not equivalent to Applicant's rear layer 22, which comprises a

ferromagnetic material as described, claimed, and drawn. Since Johnson does not teach every aspect of the claimed invention, his disclosure does not support a rejection under 35 USC 102 as clarified in MPEP 706.02(a) IV: "...for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present."

As an additional distinction, Johnson teaches in all embodiments that each coil 10, 50 has a lead or bridge (22 in FIG 3, and 58 in FIG 6) that passes downward through plated holes (18, 20 in FIG 3) in the substrate (12 in FIG 3, and 52 in FIG 6). This increases the distance of the coil 50 from the surface being tested, and adds a line of electromagnetic interference between the coils and the test surface. These problems are eliminated in Applicant's device as now specifically recited in new claim 28. Support for claims 28-30 is found in the specification and drawings. No new matter is added.

Response to Rejections under 35 USC 103

Applicant respectfully submits that the Examiner may have misinterpreted the encapsulation limitation of the rejected claims. What this material encapsulates is ferrite particles (paragraph 35, claim 19). As illustrated in FIG 3 of the present invention, the encapsulation material 34 does not necessarily encapsulate anything besides ferrite particles because it does not necessarily surround and enclose anything else. FIG 3 illustrates encapsulated ferrite particles as dots (unlabeled) in material 34. The rear layer 22 may be made of this encapsulation material 34, and may be attached to the coils by adhesive 19 as in FIG 2 (paragraph 28). No material with encapsulated ferrite particles is shown or described in either Johnson or Heidenhain.

Heidenhain discloses an insulating putty or gel 10, 12, 54 that is manually wrapped around a non-insulated electrical connection then cured with ultraviolet light. Its purpose is to insulate the connection. There is no motivation to combine Heidenham with Johnson as proposed, since Johnson apparently already has a material (not labeled or described) covering the coils as shown in his FIG 3 above and around the coil windings 10. Even if this combination were made, it would not produce Applicant's invention, as argued in the preceding paragraph.

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Therefore, the proposed combination of Johnson and Heidenham does not support a 35 USC 103 rejection.

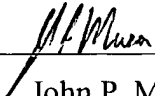
Finally, the Examiner cites Johnson page 3 lines 32-36 as disclosing ferromagnetic signal amplification. However, no mention of "ferromagnetic" or "amplification" is found in these lines.

Conclusion

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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